



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,901	09/12/2003	Paul J. Wyser	KEL 006 P2	7410
34232	7590	06/22/2006	EXAMINER	
MATTHEW R. JENKINS, ESQ. 2310 FAR HILLS BUILDING DAYTON, OH 45419			ALEJANDRO, RAYMOND	
			ART UNIT	PAPER NUMBER

1745

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,901

Applicant(s)

WYSER, PAUL J.

Examiner

Raymond Alejandro

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/19/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This office action is being provided in reply to applicant's communication of 05/19/06. The applicant has overcome most of the objections, the 35 USC 112 rejections and the 35 USC 102 rejection. Refer to the abovementioned amendment for more information concerning applicant's rebuttal arguments and remarks. However, the present claims (including newly added claim 21) are finally rejected over a new combination of art as presented infra and for the reasons of record:

Drawings

1. The drawings were received on 05/19/06. These drawings are acceptable.

Claim Objections

2. Claim 1 is objected to because of the following informalities: the term "electro e" in line 2 (first occurrence) is missing one letter. It should read "electrode". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11 and 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1745

5. The term "compact" in claim 1 is a relative term which renders the claim indefinite. The term "compact" is not specifically defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Particularly, the degree or extent of the term "compact" is uncertain.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

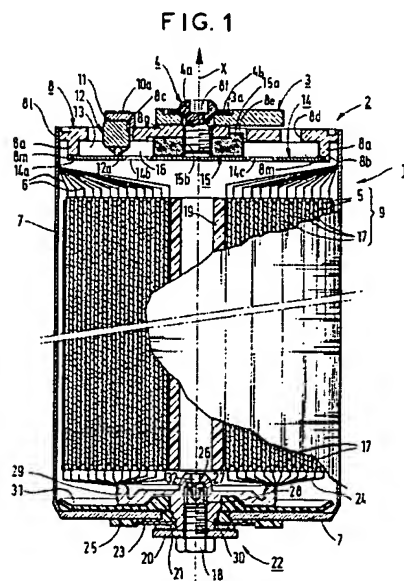
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-11, 13-15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souliac et al 6399237 in view of Applicant's Admitted Prior Art (hereinafter referred to as 'the AAPA').

Concerning claims 1, 16 and 21:

Figure 1 of Souliac et al illustrate battery cell 1 comprising a container in the form of a cylindrical can 7; and at least one alternation of positive electrode, negative electrode and separator wound in a spiral form (COL 3, lines 53-63). Souliac et al disclose that the end of the cell incorporate the negative terminal 22; wherein blades 24 are connected to the negative electrode and welded to a connecting part 29 which is in contact with a screw 18 which immobilizes a nut 20, and two washers (COL 4, lines 1-16). Included is also a screwthreaded housing 30 at the center of the connecting part 29 providing access thereto. All that is then required to make the electrical connection to the outside of the cell 1 is to accommodate the screw 18 in the external part of the housing 30 and to collect the current from the screw 18 by any appropriate means (COL 4, lines 1-16). Disclosed is a cell which is compact (COL 1, lines 25-27).



Additionally, it is disclosed that an electrical connection member 3 external to the cell 1 is fixed to the cover 8 at the end 2, the two parts 8 and 3 being fastened together by clamping means using a nut and a screw 4 external to the cell (COL 4, lines 40-52). The screw has a head

Art Unit: 1745

4a and ring inserted into the housing. The cover also includes a screwthreaded opening 8f accommodating part of the screw (COL 4, lines 40-52).

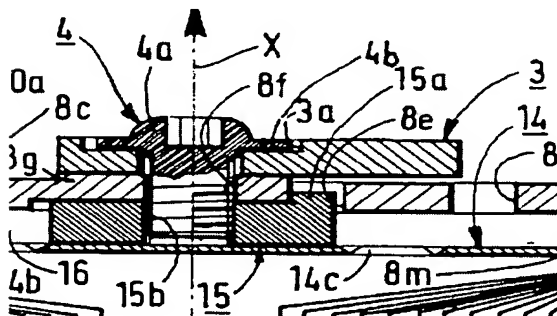
Note: In this instance, it is noted that the two screws (first and second pins) are electrically connected as instantly claimed and they are tightened mechanically.

Concerning claims 2-3, 12 and 17-18:

Souliac et al use screws themselves or screw-based connections to connect the battery (COL 4, lines 1-16/COL 4, lines 40-52/ See FIGURE 1).

As for claims 4, 9 and 19:

Furthermore, the cell of Souliac et al also comprises a nut 15 which also provides electrical connection and mechanical stability to the screw on the positive electrode side (See FIGURE 1). Souliac et al disclose that such a nut is a nickel-plated steel element (COL 4, lines 40-45). *If feature 15 represents the contact board, thus, as seen above in the enlarged portion of Figure 1, feature 15 is arranged in a depression in the housing.*



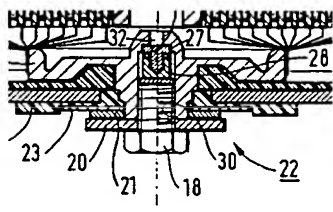
Concerning claims 5, 13-14 and 20:

As illustrated in **Figure 1** above, the cell of Souliac et al at least comprises two screw (pins) in electrical connection with the electrodes thereof (See FIGURE 1).

Concerning claim 6:

Art Unit: 1745

Enlarged portion of Figure 1 below depicts the screw 18 being in the form of a small tube (See Figure 1). *Additionally, it is apparent that the tube form of the screw per se provides the claimed broadened area in the screw to allow it to support therefrom. Absent further description of the structure of the broadened area, it is contended that the screw does have broader sections along its length that allow it to support in the battery case.*

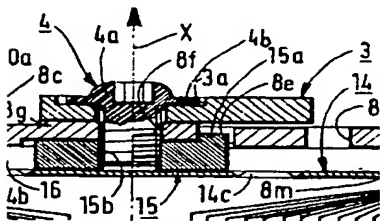


Concerning claims 7 and 15:

As illustrated above in **Figure 1**, only one screw is held at only one end (See FIGURE 1).

Concerning claims 8 and 10-11:

Either nut 20 or electrical connection member 3 serves as the contact board (See FIGURE 1). Moreover, as seen below feature 3 is divided into two sections, one section on the right and another section on the left (See Enlarged Portion of Figure 1 below). *Also, since at least electrical connection member 3 provides electrical connection therebetween, it can be reasonably argued that it is an electronic component. Unless the present claims provide further structural description of the specific contact board and/or contact connections, it is contended that the cited members meet the claimed structural requirement.*



Art Unit: 1745

Souliac et al disclose a sealed storage cell according to the aforementioned aspects. However, the preceding prior art reference fails to expressly disclose the specific metallic supporting strip welded to at least one pin.

The AAPA in paragraphs 0029-0030 and Figures 1A- B discloses and illustrates a contact bushing from the anode to an outer contact surface; the housing cover 13 conductively connected to the positive pole; a contact rivet being arranged in an opening in the housing cover; wherein the rivet head on the outside of the housing and the bent-back rivet feet on the inside of the housing hold the rivet in an interlocking manner. On the inside of the housing, the contact rivet is connected on the rivet feet by means of a contact weld 15a to an output conductor lug 15 for the anode (Applicant's specification at P0029/FIGURES 1A-B). An output conductor lug for the cathode is fitted to the metallic housing cup 16 by means of a contact weld 17a (Applicant's specification at P0030/FIGURES 1A-B).

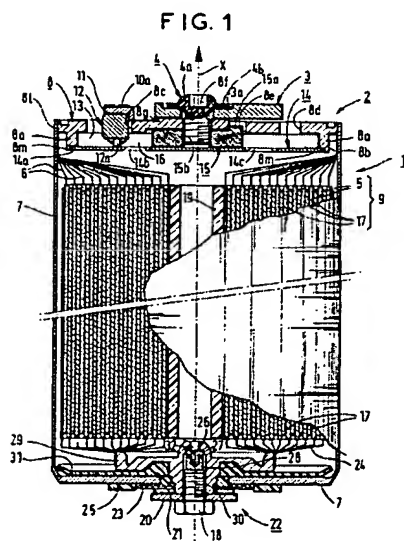
In view of the above, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to weld the specific metallic supporting strip to one pin of Souliac et al as taught by the AAPA as the AAPA teaches that such a welding joint and contact is already in widespread use, that is, it is well known in the art to weld two components together so as to enhance mechanical stability and structural integrity in a battery while maintaining a satisfactory degree of electrical conductivity between the components. *In this instance, the AAPA is being applied hereinabove to show that the general concept of welding two components (i.e. the metallic supporting strip and at least one pin) of a battery is a concept and/or an application already well known in the battery art. Therefore, such a limitation is unable to properly define a novel feature in view of this teaching.*

Art Unit: 1745

9. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souliac et al 6399237 in view of Applicant's Admitted Prior Art (hereinafter referred to as 'the AAPA'), and further in view of Sugalski 4322484.

Concerning claim 16:

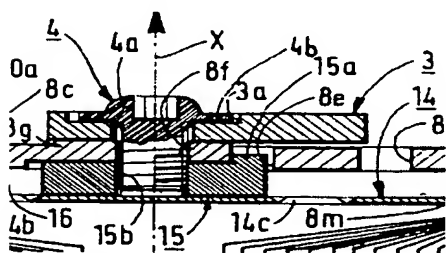
Figure 1 of Souliac et al illustrate battery cell 1 comprising a container in the form of a cylindrical can 7; and at least one alternation of positive electrode, negative electrode and separator wound in a spiral form (COL 3, lines 53-63). Souliac et al disclose that the end of the cell incorporate the negative terminal 22; wherein blades 24 are connected to the negative electrode and welded to a connecting part 29 which is in contact with a screw 18 which immobilizes a nut 20, and two washers (COL 4, lines 1-16). Included is also a screwthreaded housing 30 at the center of the connecting part 29 providing access thereto. All that is then required to make the electrical connection to the outside of the cell 1 is to accommodate the screw 18 in the external part of the housing 30 and to collect the current from the screw 18 by any appropriate means (COL 4, lines 1-16). Disclosed is a cell which is compact (COL 1, lines 25-27).



Additionally, it is disclosed that an electrical connection member 3 external to the cell 1 is fixed to the cover 8 at the end 2, the two parts 8 and 3 being fastened together by clamping means using a nut and a screw 4 external to the cell (COL 4, lines 40-52). The screw has a head 4a and ring inserted into the housing. The cover also includes a screwthreaded opening 8f accommodating part of the screw (COL 4, lines 40-52).

Note: In this instance, it is noted that the two screws (first and second pins) are electrically connected as instantly claimed and they are tightened mechanically.

As illustrated above in **Figure 1**, only one screw is held at only one end (See FIGURE 1). Either nut 20 or electrical connection member 3 serves as the contact board (See FIGURE 1). Moreover, as seen below feature 3 is divided into two sections, one section on the right and another section on the left (See Enlarged Portion of Figure 1 below). *Also, since at least electrical connection member 3 provides electrical connection therebetween, it can be reasonably argued that it is an electronic component. Unless the present claims provide further structural description of the specific contact board and/or contact connections, it is contended that the cited members meet the claimed structural requirement.*

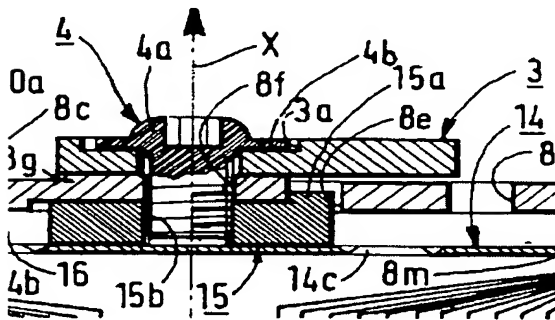


Concerning claims 17-18:

Souliac et al use screws themselves or screw-based connections to connect the battery (COL 4, lines 1-16/COL 4, lines 40-52/ See FIGURE 1).

As for claim 19:

Furthermore, the cell of Souliac et al also comprises a nut 15 which also provides electrical connection and mechanical stability to the screw on the positive electrode side (See FIGURE 1). Souliac et al disclose that such a nut is a nickel-plated steel element (COL 4, lines 40-45). *If feature 15 represents the contact board, thus, as seen above in the enlarged portion of Figure 1, feature 15 is arranged in a depression in the housing.*



Concerning claim 20:

As illustrated in **Figure 1** above, the cell of Souliac et al at least comprises two screw (pins) in electrical connection with the electrodes thereof (See FIGURE 1).

Souliac et al disclose a sealed storage cell according to the aforementioned aspects. However, the preceding prior art reference fails to expressly disclose the specific metallic supporting strip welded to at least one pin.

The AAPA in paragraphs 0029-0030 and Figures 1A- B discloses and illustrates a contact bushing from the anode to an outer contact surface; the housing cover 13 conductively connected to the positive pole; a contact rivet being arranged in an opening in the housing cover; wherein the rivet head on the outside of the housing and the bent-back rivet feet on the inside of the housing hold the rivet in an interlocking manner. On the inside of the housing, the contact rivet is connected on the rivet feet by means of a contact weld 15a to an output conductor lug 15 for the anode (Applicant's specification at P0029/FIGURES 1A-B). An output conductor lug for the

Art Unit: 1745

cathode is fitted to the metallic housing cup 16 by means of a contact weld 17a (Applicant's specification at P0030/FIGURES 1A-B).

In view of the above, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to weld the specific metallic supporting strip to one pin of Souliac et al as taught by the AAPA as the AAPA teaches that such a welding joint and contact is already in widespread use, that is, it is well known in the art to weld two components together so as to enhance mechanical stability and structural integrity in a battery while maintaining a satisfactory degree of electrical conductivity between the components. *In this instance, the AAPA is being applied hereinabove to show that the general concept of welding two components (i.e. the metallic supporting strip and at least one pin) of a battery is a concept and/or an application already well known in the battery art. Therefore, such a limitation is unable to properly define a novel feature in view of this teaching.*

Additionally, neither Souliac et al nor the AAPA expressly disclose the housing produced from a plastic.

Sugalski discloses a spiral wound electrochemical cell (TITLE). Disclosed also is to form terminal strap in a given shape having leg portions welded to the edges of the spirally wound electrode plate and having a central raised portion which is attached thereto (COL 1, lines 35-39). Of particular significance is the fact that Sugalski makes use of casing constructed of metal (COL 4, line 26-27) or plastic materials having whatever structural integrity is required for the particular use to which the cell is designed (COL 4, lines 26-38/ COL 6, lines 30-38). As a result, the total volume of a resulting battery comprising several such cells can be made less than with

batteries comprising other housing materials (COL 6, lines 30-38). *Thus, total volume and weight of the battery is significantly reduced.*

With all these teachings, it would have been obvious to a person possessing a level of ordinary skill in the pertinent art at the time the invention was made to use the housing produced from a plastic of Sugalski in the battery of both Souliac et al and the AAPA as Sugalski teaches that by plastic battery housings can be made having whatever structural integrity is required for the particular use to which the cell is designed, and that total volume and weight of the battery is significantly reduced by using plastic materials. Thus, plastic battery housings are suitable for obtaining the desired degree of structural integrity; as well as, a reduced volume and weight. *Additionally, the Sugalski reference also is relevant because it directly teaches the interchangeability of using either a metal material or a plastic material for battery housings containing wound electrode structures. Thus, such a teaching is pertinent to Souliac et al and the AAPA, which seems to use metallic materials for housing wound electrode structures.*

Response to Arguments

10. Applicant's arguments with respect to claims 1-11 and 13-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/660,901
Art Unit: 1745

Page 14

Raymond Alejandro
Primary Examiner
Art Unit 1745



RAYMOND ALEJANDRO
PRIMARY EXAMINER